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ABSTRACT

Vocational educators have been making notable efforts to serve students with disabilities for many years. For more than 20 years, federal legislation has sought to facilitate such efforts by requiring that a portion of federal funding for vocational education be set aside to serve handicapped students. Disabled students can be educated either by mainstreaming them into the regular education system or by putting them into special education. However, mainstreamed students often lack assistance from special educators, and vocational educators cannot provide the services these students need. Because of this problem and the way that accounting systems for funding are set up, many school systems have arranged special programs of career/vocational education for students with disabilities. These programs offer employability training, special work experience, and separate instruction. However, these programs cannot provide the occupational training that vocational education does. What is needed is a program based on cooperation between vocational and special education departments. A unified system of service delivery is essential to providing exemplary vocational education for disabled students. Only when significant steps are made toward this goal will there be improvements in the level and quality of participation by students with disabilities in vocational programs. (KC)

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IMPROVING PARTICIPATION OF HANDICAPPED STUDENTS IN VOCATIONAL EDUCATION: TOWARD A UNIFIED SYSTEM OF SERVICES

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IMPROVING PARTICIPATION OF HANDICAPPED STUDENTS IN VOCATIONAL EDUCATION: TOWARD A UNIFIED SYSTEM OF SERVICES

The participation and success of handicapped students in vocational education is a long-standing concern of federal policy. The Carl Perkins Vocational Education Act, like previous federal legislation, sets aside ten percent of each state's basic grant for vocational education programs serving students with handicaps. The new law also requires each local education agency to provide information to these students and their parents about opportunities in vocational education. In addition, federal policy emphasizes the importance of offering these opportunities in the "least restrictive environment."

Unfortunately, it has been very difficult to determine the nature and type of participation in vocational education programs by handicapped students on a national basis. Data collected by many state vocational education departments have generally relied upon the classroom teachers to specify which students have handicapping conditions, and in many cases the teachers do not know what those conditions are.[1] As a result of this, accurate counts of handicapped students in vocational programs have not been made in many states, so it is not possible to describe national participation levels in vocational education for handicapped students.[2]

Despite the lack of national data describing the participation of handicapped students in vocational education, case studies have provided information on patterns of participation in a variety of school settings. While most vocational educators report an increase in the numbers of students attending mainstream vocational classes and many special educators report their own accelerated effort in preparing students for employment, we are still a long way from providing, on a widespread basis, a system of vocational education that both encourages participation by students with handicaps and also assures they will participate in a program that provides the extra assistance they need in the least restrictive environment. This paper describes current patterns of handicapped students' participation in vocational education.[3] It then

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[1] In some cases, teachers are actually denied access to this information in order to prevent them from developing prejudices against students based on their disabilities, while in other cases the information is available but not directly provided.

[2] See Beno, Barbara, E. Gareth Hoachlander, et al, *Vocational Education Survey of Special Populations*, a report prepared for the Center for Education Statistics, U.S. Department of Education, January 1987.

[3] This description of participation by handicapped students prescription for change is based on a study funded by the Office of Special Education and Rehabilitative Services in which project staff visited thirty exemplary programs serving handicapped

prescribes a fundamental change in approach that is needed if we are to provide handicapped students the quality vocational education necessary to improve their employment options.[4]

Patterns of Participation in Vocational Education

Vocational educators have been making notable efforts to serve students with handicaps for well over a decade. Partly in response to legislation and rulings prohibiting discrimination against handicapped students and partly in response to the lobbying of interest groups representing handicapped persons, some vocational education departments began to make special provisions so that handicapped students could be trained without going to special schools. The passage of the Education for All Handicapped Children Act (P.L. 94-142) brought increased numbers of handicapped students into regular vocational classes and prompted a greater effort to serve these students in many schools. Various kinds of efforts to reach these students were launched, with some schools establishing special classes, some providing special materials or assistance to students in regular classes, and others teaching their vocational teachers how to recognize and understand students' learning problems.

Since 1968, federal legislation has sought to facilitate such efforts by requiring that a portion of federal funding for vocational education be "set aside" to serve handicapped students. The Vocational Education Act Amendments of 1976 and in the Carl D. Perkins Vocational Education Act of 1984 included a funding "setaside" for handicapped students. These acts have ensured that some money would be reserved for assisting handicapped students. The funds may be used for a variety of purposes so long as they fund either of the following: (1) special classes and services earmarked for vocational education only; or (2) the "excess cost" of educating handicapped students in regular programs (i.e.—expenses over and above what it would cost to train a non-handicapped student in the same class).[5] In providing the setaside, Congress recognized that many handicapped students require special help in order to succeed in the vocational curriculum. The setaside funds are provided for the support services that handicapped students require when they attend vocational classes, but federal

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students in six states, as well as on research for the Center for Education Statistics, in the course of which project staff visited fourteen school districts and seven community college districts in seven states .

[4] This prescription for change is based on a study funded by the Office of Special Education and Rehabilitative Services in which project staff visited thirty exemplary programs serving handicapped students in six states. A full discussion of the characteristics of successful programs can be found in Institute for the Study of Family, Work, and Community, *Improving the Options of Handicapped Students in Mainstream Vocational Education*, July, 1987. The description of participation by handicapped students is based on that research as well as research in fourteen school districts and seven community college districts in seven states for the Center for Education Statistics, summarized in Beno, Hoachlander, et al, 1987. For both projects, interviews were conducted with state, school district, and school personnel.

[5] Since 1976, these funds have also been subject to a fifty per cent state and/or local matching requirement.

policy does not dictate how those students should be served or the educational setting in which they should learn.

The decision to place a student in the mainstream or separate setting for vocational education becomes part of the student's independent education plan (IEP) for the high school years. When the IEP committee meets to assign a handicapped student to vocational or academic classes, a decision is made to mainstream that student or keep him in a separate setting. In most school districts, the IEP committee's initial decision for placement into vocational education has a profound effect on the character of the vocational education experience for a handicapped student. While both mainstreamed and non-mainstreamed students may receive some of the same training in academic and employability skills through the special education curriculum, responsibility for their training usually diverges once the IEP committee places some students in mainstream vocational education and others in separate programs. Once this placement decision is made, the employability of the mainstreamed student becomes the primary responsibility of the vocational education system rather than the special education system.

Unfortunately, at that point the employment future of the mainstreamed student may well cease to receive any significant amount of attention from the special education system at all. The special education department usually does not maintain adequate records on the vocational enrollment of mainstreamed students. Many of the special education teachers are not aware of the type of mainstream vocational instruction their students are receiving, let alone how they might assist the student. Only in rare cases are special educators or special education funds involved in assisting those students, or in assisting the teachers who must teach those students. Special educators do not see necessarily themselves as consultants to the mainstream.

In the absence of assistance from special educators, many vocational teachers have difficulty providing appropriate education for mainstreamed handicapped students. The major difficulties are the teachers' own lack of information and the size of their classes. Many vocational education teachers lack the specialized knowledge to choose or provide the kinds of services their handicapped students need. Most vocational teachers lack sufficient information about their handicapped students: some have never been informed about their students' disabilities, while many others know little more than the category label applied. Very few vocational teachers talk regularly to the special education teachers about particular students, and even fewer have ever reviewed an IEP. As a result, good teachers often find their efforts are inadequate with handicapped students.

Large classes also burden many mainstream vocational teachers, inhibiting their ability to individualize instruction. The class size in the mainstream lab is usually a startling contrast to that in the special education class or special vocational education class: student-teacher ratios in the mainstream are generally more than double those in the separate class. With classes this large, it is unlikely that any expenditure of the setasides can substitute for the lack of time with the teacher and time with the equipment that many handicapped students need.

Thus the decision to mainstream a student or keep that student in a separate program not only determines the student's options but also the level of assistance which that student will receive. The system of service delivery is intensive and individualized for non-mainstreamed students; mainstreamed students participate in a vocational education system which permits less individualization and less feedback. While it is true that the students who are more likely to be mainstreamed are the very students who require less attention than their non-mainstreamed peers, the gap in service levels is far larger than any difference in average need between two recognizable groups of handicapped students. A high level of functioning is required in order to succeed in mainstream classes without additional support, despite the fact that a lower functioning student could succeed in that setting with more support.

If the vocational education department is not equipped to provide an experience appropriate to handicapped individuals and there is no provision for special educators to assist mainstreamed students, increased access to mainstream vocational education may not benefit handicapped students. In some schools, vocational education programs have become dumping grounds for students who do not do well in the academic setting, whether handicapped or non-handicapped. In some schools, the "mainstream" food service programs are comprised of as many as two-thirds handicapped students, yet these programs have class sizes of over twenty-five. Since mainstreaming is a low cost alternative to separate classes for handicapped students and since P.L. 94-142 mandates education in the least restrictive environment, there is a double inducement to place students in the mainstream setting. Yet in too many cases this action has the effect of putting the student in a setting in which he or she cannot succeed.

How Special Educators Have Compensated for Perceived Inadequacies in Mainstream Programs

If vocational education were available to handicapped students in the mainstream setting only, special educators might act as advocates for their clients in securing their access to appropriate training and seeing that adequate assistance is made available. Equal access is still

a stated goal in many vocational programs, but a declining number of special education teachers and supervisors still expend much energy securing access for their students to mainstream vocational classes. Even in schools where mainstream vocational education has not served vocational education very well, special educators rarely pressure vocational departments to better serve handicapped students in the mainstream classroom. Instead, many special educators have shifted their efforts to providing their own instruction or pressuring vocational departments to offer separate vocational classes.

Increasingly, vocational education departments are offering separate classes tailored for handicapped students. At the same time, special educators' attention has shifted from access issues to "transition" issues, especially their students' general employability at graduation. Many appear to have lost faith in the ability of vocational education classes to accomplish that goal. Consequently, special educators are increasingly involved not so much in seeing that their students have access to appropriate vocational education programs, but in designing and offering vocational education themselves.

Special educators in a growing number of schools have designed programs to provide opportunities for career exploration and instruction in general employability skills. Special educators are also increasingly active in teaching their students job-getting skills through classroom instruction: selecting jobs, applying for jobs, and interviewing successfully. This portion of the curriculum reflects the view of special educators that students should be prepared for working in general. In contrast to vocational educators' emphasis on specific skills for identifiable occupations, special educators emphasize that their students' *employability* must be developed, with specific job skills being less important. This emphasis on employability rather than on occupationally specific skills reflects the special educators' lack of training in vocational education as well as their recognition that many handicapped students are more lacking in general employability skills than other students.

Many special education departments also offer instruction in employability skills through separate work experience programs for handicapped students. These programs differ from those which culminate a vocational sequence: they are not designed to provide on the job training in occupationally specific skills, but are designed to provide an opportunity for students to acquire the "employability skills" which are needed for keeping any job. Such work experience programs require no specific vocational education. Work experience is offered to handicapped students as an alternative to vocational instruction in some school

districts.[6] The outcome of special work experience and employability training is general job readiness or, at most, training for occupations with low skill requirements.

Another area of effort in some states has been the separate vocational sequence, which is often designed or staffed by special educators although it is part of the vocational curriculum.[7] In some school districts the students can move from the separate setting to the regular classroom if they progress well enough, but in practice most students assigned to the separate program stay in that setting because they never achieve a level of skill sufficient for them to transfer and, equally important, no effort is actually made to increase the number of transfers. In theory, these students would progress at a slower rate but learn the same occupational skills as those in the regular classes, eventually achieving the same level of competence that they would in the mainstream. However, this is not the experience for many handicapped students. In schools with a well-developed separate vocational sequence, there may well be an adequate learning progression to train handicapped students for entry level jobs in certain fields, usually such fields as child care or housecleaning for women and fields such as janitorial or groundskeeping for men. Rarely is there a complete separate sequence aimed at jobs requiring higher skills than these, so students assigned to the separate vocational sequence have been quite restricted in their options.

In school districts where the separate sequence has not been well developed, handicapped students may have more options to choose from in the first year but do not have the opportunity to progress in the program they select. In these cases, students are moved from one first-year vocational course to another because there is not a true vocational sequence developed for these students. This form of "vocational exploration" leaves students with some introductory skills in two or three fields, but that type of experience prepares them neither for entry-level employment nor for postsecondary education in any of the fields they have experienced.

These three kinds of efforts by special education departments—employability training, special work experience, and separate instruction—have been designed for students who could not succeed in the mainstream vocational classroom. Each of these three is a needed component of a complete vocational education system for handicapped students, but these

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[6] These stand-alone work experience programs should not be confused with work experience that is offered as the last year of specific vocational education. Jobs held as part of a vocational sequence are often referred to as "coop,." They involve work in the vocational field in which the student has trained and are supervised by a certified vocational education teacher.

[7] The training of the teachers in the separate sequence may be regulated by state law. Some states require that vocational teachers run such classes, while in other states a special education teacher is permitted to teach them.

experiences will not provide the type of occupationally specific training that students can get in a mainstream vocational sequence. In their effort to provide support for handicapped students, many special education departments have abandoned the concept of least restrictive environment and, in so doing, have limited the educational options of handicapped students who could succeed in the mainstream with proper support. In an era where the policy of separating handicapped students into their academic own classrooms has begun to come into question, many special education departments are building their own system of vocational education or employability training and encouraging students to choose that system over the vocational programs available to other students.[8]

Vocational Educators' Acquiescence in the Establishment of a Separate System

Separate courses have become quite popular with vocational teachers as well as with special educators. Many of the vocational teachers prefer to weed out those students who pose a special challenge from their regular classes because they fear they will have to "water down" their courses if they include students with learning problems. Administrators prefer the separate classes as well, partly because this arrangement simplifies the calculation of the "excess cost" of providing vocational education for students with handicaps.[9] In those cases where the vocational education department is not committed to serving handicapped students, placing handicapped students in separate classes is a very attractive solution because this arrangement can be used to remove these students from the regular classroom and put the entire burden of educating them on the most receptive teachers. Sometimes the separate class is added as an extra class period to the teacher's day, creating an "overload" schedule which requires a special payment. Often, vocational teachers do not object to this arrangement, combining the relative ease of segregated classes and the advantage of extra pay. In districts where the overload option is available, many teachers apply to teach such courses, even some who resist taking handicapped students into their mainstream classes.

The allocation of federal funds into separate classes not only allows resistant vocational educators to keep students separated but may also lead responsible vocational and special educators to prefer the separate setting, even when they believe in mainstreaming. When schools channel a large portion of the setaside and matching funds into the segregated setting in

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[8] See Alan Gertner and Dorothy Kertzner Gretzky, "Beyond Special Eduction: Toward a Quality System for All Students," *Harvard Education Review* V.57, November 1987, pp.367-395.

[9] Under previous vocational education legislation, federal funding arrangements actually encouraged separate classes by permitting a higher rate of reimbursement for these than for excess costs in mainstream classes. Although expenditures in both settings are now treated equally, some of the effects persist due to the slowness of institutional change.

order to support separate classes as nearly as possible with "outside money," there may be little "outside money" left for support services to the mainstream and little "local money" allocated for that purpose either. In such schools, mainstreamed students have fewer support services than they need. Then the separate classroom, with its smaller size and more sympathetic teacher, may actually be a more effective learning environment. Even where the mainstream class is taught by an excellent and sympathetic teacher, the lack of support services available there will likely decrease the effectiveness of these programs.

Not only do many vocational administrators prefer to spend much of the setaside on separate classes, they are also driven by accounting concerns in the way they allocate setaside funds to mainstream settings. Although there are actually few federal restrictions on the type of items that setaside money can be budgeted for, local education agencies have been very conservative in the way they have spent VEA money. Due to the "excess cost" requirement and the difficulty of calculating excess costs for a particular class, school administrators have preferred using the setasides for services that produce a separate line item in the budget (when they are not spending the setaside funds on totally separate classes). Vocational administrators fear they cannot fund any item which would increase the quality of the mainstream classroom experience for all students, and they are not willing to face charges of supplanting during a federal audit.[10] The popularity of certain services is attributable more to this quality than to their educational value in a particular setting. Teachers' aides are a good example: aides are commonly funded as a special support service, although many vocational education teachers feel that most aides are so inexperienced that they are more hindrance than help. Other popular expenditures are special teaching materials, special equipment for the physically handicapped, and tutors. Despite the need to provide release time for special educators to visit vocational classes and stipends for vocational teachers modifying their curriculum, the setaside funds are rarely used for these purposes. Administrators prefer to spend the setaside on "safe" items rather than on the services most needed by the students served. Accounting concerns drive out educational concerns.

Dual Systems of Education for Employment

Given the development of a separate system of special vocational education and the increasing levels of enrollment in that system, what we have in many school districts is a dual system of education for employment. The dual system of vocational education for handicapped

[10] Beno and Hoachlander, et al, p.32.

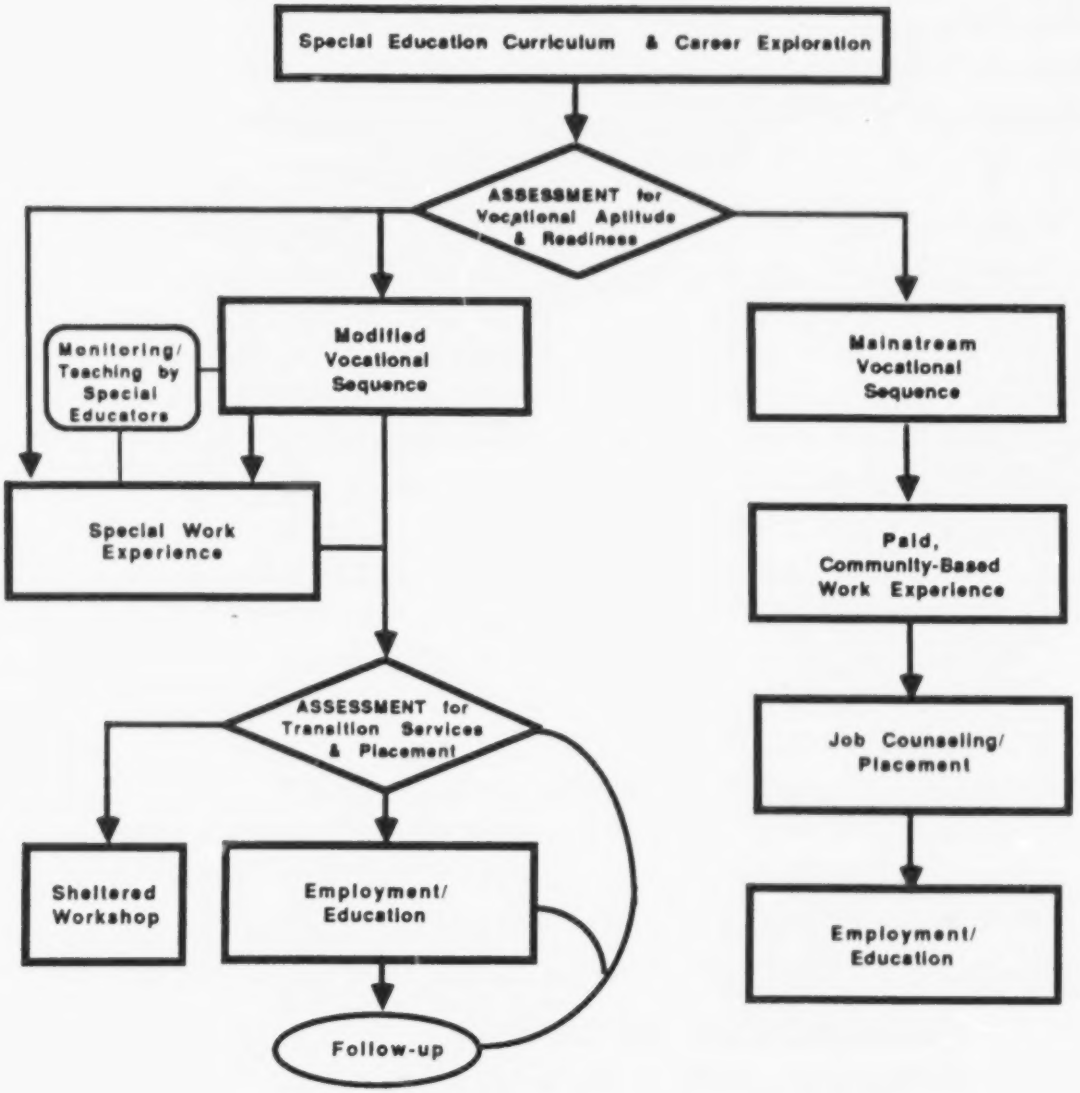
students is shown in Figure 1 below. In this model, both the mainstream setting and the modified setting offers every component that we expect in an exemplary vocational program in that setting, but the connection between the two systems is missing once students are placed into one of them after initial assessment.

In a school district with these dual systems, students are tracked into either a modified or a mainstream vocational sequence. If mainstreamed, they are expected to follow that sequence with the same level of assistance as any other student. Their special education teacher may help them with materials for their vocational program, but this occurs strictly on an *ad hoc* basis. Mainstreamed students are expected to progress through the vocational courses on their own and to participate in any work experience program following from those courses. These students receive whatever job counseling and placement services are regularly offered by the school and move on to employment or postsecondary education after graduation. In practice, mainstreamed vocational students who attend special education classes for the rest of the day will probably also receive substantial counseling from their special education teacher, as well as possibly some job placement assistance.

Students who are kept out of the mainstream will participate in the modified program that is set up by the special education department. Figure 1 shows the full range of options that might be provided, although in most school districts there will be fewer components that those shown here. Some districts take a work experience approach exclusively, while others rely upon the modified vocational sequence for employment training.

Without some requirement that special educators expand their mission to include direct service to vocational education students in mainstream vocational courses and to those who teach them, it is not surprising that these specialists prefer to channel their energies into their own courses rather than trying to influence vocational educators who, they fear, may not appreciate their efforts. And with separate programs offering a solution to vocational teachers who do not know how to teach handicapped students, vocational education departments are often just as happy to see the parallel system develop.

Figure 1
Dual Systems for Vocational Education of Handicapped Students



However, the existence of two separate systems of vocational education has important ramifications not only by limiting the options of students assigned to the separate program, but also for the quality of training that handicapped students can receive in the mainstream. Since

these two systems can remain quite separate, there is no guarantee that students in the mainstream will in fact receive the specialized assistance that they need in order to succeed with their vocational education. And all too often, students who could profit from mainstream programs are discouraged from enrolling in them and are restricted to the separate curriculum.

Unifying the Dual Systems of Vocational Education for Handicapped Students

Schools must bring these two separate systems of vocational education closer together in order to improve handicapped students' employability in appropriate settings. This effort requires that special educators and vocational educators work together in the design and implementation of vocational programs and related services. In order to mainstream more students, and in order to provide needed services to mainstreamed students, special educators and vocational educators must learn to work together and they must learn to communicate on a regular basis about the structure of the curriculum and about particular students. "Communication" must mean a true sharing of perspectives as well as regular formal interaction.

Integrating the expertise of special educators and vocational educators is the key to improving the quantity and the quality of participation by handicapped students in vocational education. This seems like the obvious strategy, yet the implementation of this notion has proved exceedingly difficult in many schools. Since the quality of the vocational education program for handicapped students depends upon coordination between vocational education and special education, it is important to understand the obstacles to such cooperation.

Obstacles to Cooperation

Calls for interdisciplinary approaches to education are not unusual, but an interdisciplinary approach to vocational education for handicapped students may be particularly difficult to achieve. As disciplines, special education and vocational education have little in common: vocational education is primarily concerned with content and special education is more concerned with process. Vocational educators must prepare students to perform jobs in a changing and competitive work world. They measure student success by how closely the student's job performance approximates that of the practitioner. Special educators, on the other hand, must find ways to succeed with students for whom the regular education system is inadequate. Their students' success is measured by the amount of progress they make compared to their potential and previous performance. These differences in background and

training mean that vocational and special education teachers have very different kinds of goals for their students, different methods of evaluation, and different expectations about the adjustments they may make in their curriculum and teaching styles for individual students.

Since many vocational education teachers have had experience in their trade or occupation, they know how to supervise and instruct a wide variety of people. They have learned how to communicate with different types of people, but they are not necessarily receptive to students who are deficient in basic skills. In the world of work the employee must "qualify" for the job and is expected to understand the instructions given with a minimum of explanation. Only in the lowest level jobs is the supervisor expected to accept persons of any skill level and to provide training to employees who lack knowledge of the trade. By contrast, the special education teacher is trained to reach the students wherever they are and to use teaching strategies appropriate to each. On the job, the burden is placed on the employee to measure up; in the special education classroom, the burden is placed on the teacher to reach the student.

Although there are exceptions to this "dual system," the central tendencies of the two disciplines are sufficiently divergent to present obstacles to cooperation. The differences between the two disciplines are exaggerated by their images of each other. Special education teachers often refer to vocational education teachers as "shop teachers," despite the variety of vocations represented and the degree of skill required for various classes. Vocational education teachers often feel that special education teachers "have it easy" because special classes are so small; they resist the notion that teachers with classes of twelve students can give them practical advice on how to cope with handicapped students in a class of twenty-five or more. Some vocational teachers feel that special educators "coddle" their students, thus failing to prepare them either for the mainstream classroom or for the world of work. Some vocational educators claim that vocational education courses are valued by special educators mainly as therapy for their students, a way to make them feel better about themselves; the vocational education teacher sees the course as true work preparation. For their part, special educators claim that vocational education teachers expect handicapped students either to measure up without help or simply to mark time without causing trouble. While these views of each other are certainly not uniformly held and are certainly less common at schools with good programs, they are still common enough to serve as obstacles to cooperation between the two disciplines in many schools.

It is worth noting that the obstacles to cooperation between vocational educators and special educators vary somewhat with the vocational area. The world of vocational education is at least two worlds, the predominately male world of trade and industry and the predominately female world of the information and service economy.[11] The tendency of both students and teachers to follow traditional sex stereotyping in their occupational choices poses significant problems for assisting handicapped students in the traditionally male vocational classes. Most of the learning disabled and behavior disordered students are male, so most mildly handicapped students who are mainstreamed into the vocational classroom will choose a program in the industrial education area. This traditional pattern is further encouraged by the fact that industrial education programs have a smaller academic component than many other vocational programs, so that students with reading problems are more likely to choose them.

Despite the lesser academic element in these "shop" classes, students with learning handicaps still need special assistance in order to succeed there. Unfortunately, the personnel responsible for providing that assistance usually lack even the most basic technical knowledge in the vocational area. Most special education teachers and most teacher's aides are female, and like most adult women they have never had an introductory industrial arts class. As a result they are ill equipped to help students learn the technical vocabulary, to assist them with their projects in the workshop, or to help them master the basic skills of the trade. It is debatable how much classroom teachers or aides can be expected to learn about several trades, and it is also debatable how much they actually need to learn in order to play a meaningful role in assisting the students. But as long as many aides and special education teachers view themselves as removed from the industrial education curriculum, and as long as industrial education teachers see them as unqualified to assist students in learning their trade, the degree of cooperation and communication between special education and vocational education teachers will be far below its optimum.

Opportunities for Cooperation

Fortunately, there are new opportunities for cooperation as well as old obstacles. As special educators focus their efforts on the transition from school to work, some have realized that they should not only design their own programs, but also help vocational education succeed with handicapped students. As the increased standards for graduation take a toll on

[11] Among the occupationally specific courses in the service sector, only a few areas commonly have male teachers and some male students. This is most common in food service classes and some business courses.

vocational class sizes, some vocational teachers have realized that including handicapped students in their programs, whether in modified or in mainstream classes, is a way to protect their jobs. Recent experience has taught them that they need not fear that special educators will push for wholesale mainstreaming in vocational classes, so they are less resistant to admitting handicapped students than they were just after the passage of P.L. 94-142. Conditions for new efforts at cooperation between special education and vocational education are therefore far better now than in past years, although the differences in attitude and background remain and will continue to pose obstacles to successful collaboration.

Bringing Vocational and Special Educators Together in a Unified System of Vocational Education for Handicapped Students

Despite the differences in approach between vocational and special education, quality vocational programs for handicapped students depend upon contributions from both disciplines. Vocational educators have very specialized knowledge regarding the trade or occupation to be taught and may know the best skills progressions for achieving excellence in that trade. In addition, most vocational educators have experienced the world of work in their specialty and thus understand what kind of behavior is needed in particular work environments. Special educators, on the other hand, have the training to understand students' handicapping conditions and the particular kinds of learning progressions that work for each. When students have learning problems that impede their progress in the regular school setting, they need special services, assistance, or learning progressions appropriate to their individual problems. In order to become employable, however, they need to acquire appropriate skills to compete in their chosen field. The design and delivery of a good training system requires vocational education training; the design and delivery of appropriate modifications to that system requires special education training. As a result, these two disciplines must work together closely to provide quality vocational education for handicapped students.

In order to see that students are able to participate in a program that is appropriate to their needs and allows them to fulfill their potential, we need a composite of efforts by the special education department and the vocational education department, along with help from employers, and a local community organization such as the vocational rehabilitation agency or mental health services bureau. These entities must work together much more than is common practice; professionals hired as "support staff" may provide the daily liaison function, but there must also be joint planning and in-service training if such a program is to succeed.

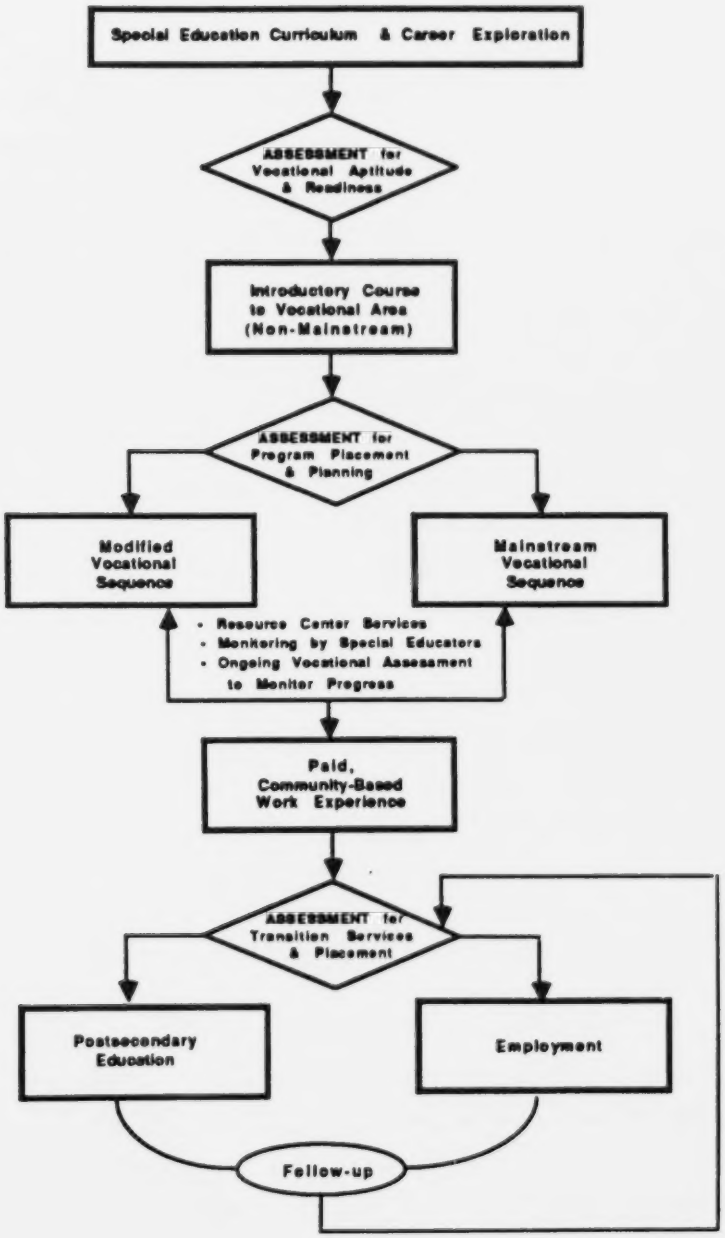
When vocational and special educators work together in a system such as that pictured in Figure 2, the excellence of the programs they forge will inspire trust in the parents, counselors, and special educators who influence student assignment, encouraging them to see vocational education as an option for students with handicaps. The changes described here will thus increase both the quality and the quantity of participation in vocational education by students with handicapping conditions.

The vocational program must build upon the assessment, career exploration, and academic experiences provided in the junior high and early high school years. This prevocational time is the responsibility of the special education department and, if established, assessment center staff. The result of these experiences should be a decision about placement for each student which reflects his or her interests and abilities. Although we expect that most mildly learning handicapped students interested in a vocational education will be placed into a special introductory vocational course, it is also possible to recommend placement into a modified vocational program for those students who will need continued special attention, or placement into a mainstream introductory vocational class for those who need very little support. In each case, the least restrictive environment should be chosen for that student. The placement decision should be made by a specialist who is also charged with the responsibility of monitoring that placement and intervening if necessary.

Once a student is placed in vocational education, the vocational education department must cooperate with the special education department in seeing that the student is well served in the chosen placement. If that placement is a separate introductory course, then the vocational teacher should have ample time to learn about each student's abilities and to teach each student with appropriate techniques. The specialist assigned to each student's case can help the vocational teacher to reach that student, as well as to monitor that student's progress and to communicate with the special education teachers about appropriate assistance which may be needed. The progress of the student in this class will be used at year's end to determine whether the student should be placed in a separate vocational class or in a mainstream class for the vocational sequence which seems appropriate. This decision should rest with the same professional who has been monitoring the original placement.

Figure 2

Unified System for Vocational Education of Handicapped Students


Special Education Curriculum & Career Exploration
ASSESSMENT for Vocational Aptitude & Readiness
Introductory Course to Vocational Area (Non-Mainstream)
ASSESSMENT for Program Placement & Planning
Modified Vocational Sequence
Mainstream Vocational Sequence
• Resource Center Services
• Monitoring by Special Educators
• Ongoing Vocational Assessment to Monitor Progress
Paid, Community-Based Work Experience
ASSESSMENT for Transition Services & Placement
Postsecondary Education
Employment
Follow-up

When handicapped students attend mainstream vocational classes, the major responsibility for the occupational and employability training rests with vocational educators. In an exemplary program, however, the support staff also plays a major role. Support staff should be part of the vocational education department, but may well be trained in special education and perhaps should also be a part of the special education department. Support staff are responsible for seeing that students receive the special services they need, either by providing these themselves or making sure that special education teachers provide this assistance. In either case, support staff is in close contact with vocational teachers, and should be housed at the same facility. The support staff will have little occasion to assist students in separate classes, since these classes will be small. In addition, separate classes are often taught by those teachers most experienced with special needs students, perhaps teachers with extensive special education training as well as vocational certificates. For each student, whether mainstreamed or not, the professional who has placed that student should maintain communications with all personnel involved and monitor the student's progress.

As the student moves into the work experience component of a vocational course sequence, responsibility for that student will still be held mainly by the vocational educators who place the student and supervise the program. Vocational special needs support staff will be less important, but the services of counselors or job coaches will become important. The professional who has had responsibility for placing and monitoring this student during the high school years will coordinate with the work experience supervisors to keep special education teachers informed of their students' progress and aspects of employability skills which may need to be stressed in the classroom. Special educators should teach a unit on job finding as part of their classroom curriculum. The vocational rehabilitation agency or mental services bureau may assist in the job coaching process. Local employers should also become involved in teaching students and communicating to the schools about their student trainees.

Before graduation, the IEP conference should focus on the transition process. Although special personnel should be hired to make job placements, the vocational and special education teachers should be involved at the transition conference in recommending placements. A representative of the local vocational rehabilitation agency should attend the transition conference as well. The conference should result in an effort by the placement specialist to place the student in an appropriate job or, if at all possible, in a postsecondary program. Job specialists should continue their involvement with each student for at least a year after job placement, counseling the student, monitoring the placement, and answering employers'

questions. Job specialists will know the entire program has been a success when an employer asks for more of their clients when an opening occurs. As a school's vocational program more closely approximates this model for its mildly handicapped students, that sign of success should become more common.[12]

How do vocational and special educators work together in a unified system of service delivery?

The type of program described above depends upon regular communication between vocational and special educators. This is often difficult, due to the heavy schedule that most teachers have to keep. Even when there is time in the day for special education teachers to assist vocational students with their work, special education departments often fail to provide appropriate support services to vocational students in the mainstream. This problem is greatly exacerbated when the special education teacher is located at a different campus than the vocational teacher.

In too many schools, it is up to the individual vocational instructor to contact the special education teacher for advice about a student or to ask that the student receive extra help connected to the vocational class. In some schools where this pattern prevails, support services may be provided when a vocational teacher is unusually energetic and the special education department unusually interested. These successes notwithstanding, we should not design educational systems which depend so heavily upon unusual teacher initiative.

Good communications all too often depend upon physical proximity and personal acquaintance. Even where these are present, communication cannot be taken for granted but must be designed into the system. Only very small schools appear to have excellent communications without a formal system structuring that communication. It is more difficult to facilitate communications at a large school, especially at a vocational center with a number of feeder schools. The informal approach only works well where there are few clients and few other professionals serving them.

Rather than depending upon the individual vocational teacher to contact a special educator, or depending upon the special educators to contact the vocational teacher, it is better if one person is given the job of organizing the flow of support services. This person must

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[12] For more information on what each actor in the unified system can do and what each professional can do acting alone to improve participation of handicapped students, see Institute for the Study of Family, Work, and Community, *Increasing Vocational Options for Students with Learning Handicaps*, 1987. This is a manual for practitioners on practical steps toward improving vocational education for mildly handicapped students.

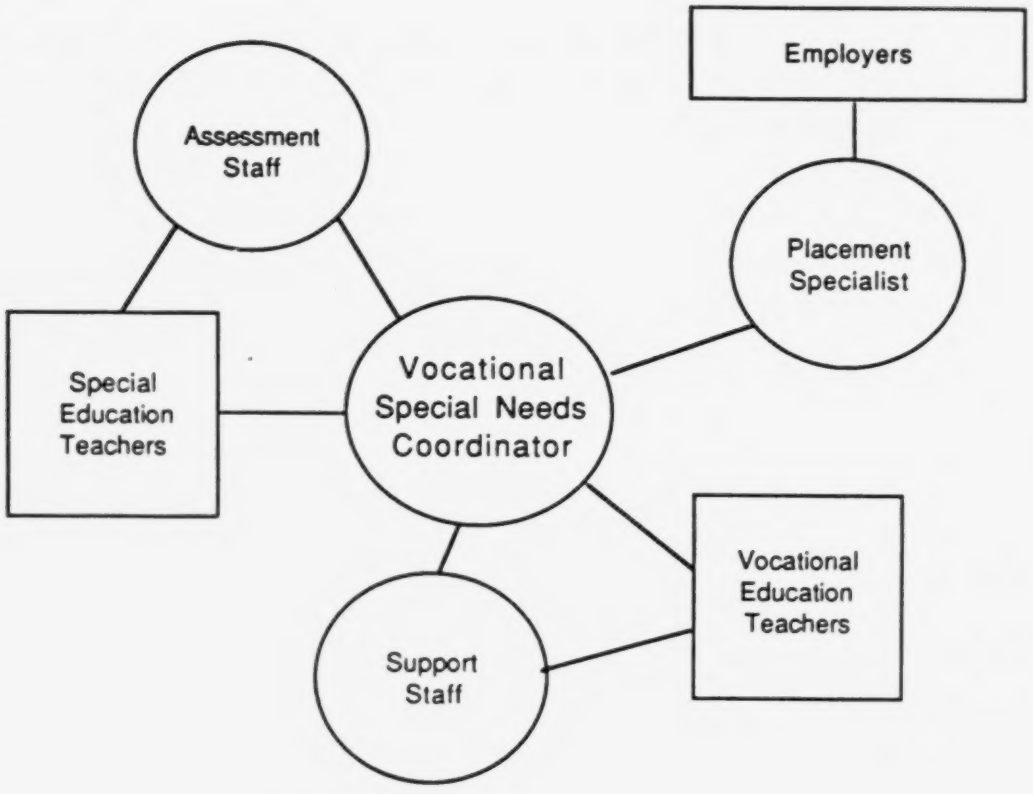
have easy access to the clients and all of the service providers, and must maintain good communications with each. He or she may be trained either in vocational or special education, but must have a working knowledge of the skills involved in the vocational programs enrolling handicapped students. This qualification deserves some emphasis. It may be that someone trained in special education can acquire, in the first year, a familiarity with several vocational programs that will serve to make his or her assistance to students in later years more valuable that it would be without that knowledge. The other possibility is to train a vocational educator in some of the techniques of special education during the first year of service. In either case, it is important that the coordinator embody a blending of the two disciplines so he or she will be equipped to deal with student exceptionalities but to understand the demands of the vocational curriculum.

The role of such a coordinator is to provide information that can help the teacher understand students' needs, communicate job and educational opportunities to students and their parents, develop employer contacts, and facilitate interaction between special educators at a students' home school and vocational teachers, whether at comprehensive or at vocational high schools. A good ratio of coordinators to students is 1 to 100 where coordinators have no instructional duties, and 1 to 30 or fewer where they run a resource laboratory or teach some classes.

Figure 3 illustrates the communications flow surrounding an effective special needs coordinator in a large school or school district. In smaller schools or small school districts this pattern of coordination may not be appropriate. Staff in smaller organizations frequently fill more than one role, simplifying the coordination task although running the risk of overwork.

Figure 3

Coordination in a Model Vocational Education Program



In order to establish and sustain programs based on the model recommended here, local education agencies must allocate substantially greater resources to vocational education than they have in the past. In addition, both vocational and special educators must learn to resist old patterns of thinking about how education is "delivered." Although the individual classroom teacher is extremely important to the quality of vocational education for the student with a handicap, local educators need to recognize that an entire system of services must be designed to coordinate with vocational classes. Without support services directly tied to instruction for each student, vocational education programs will fall short of their potential to improve the

employability of most students with mild disabilities. When this failure is realized by counselors, parents, and special education teachers, then participation of handicapped students in mainstream vocational education programs will be reduced as more of them are redirected to separate programs.

A unified system of service delivery is essential to providing exemplary vocational education for handicapped students. Only when significant steps are made toward this goal will we see improved level and quality of participation by handicapped students in vocational programs.